

# *VOLTAGE REGULATED GMAW WELDING USING A CONSTANT CURRENT POWER SOURCE AND WIRE FEEDER HAVING VARIABLE GAIN*

## **Abstract**

A system and method of duplicating CV mode of operation with a CC power includes a wire feeder designed to automatically adjust the speed of which consumable wire is delivered to a weld so as to maintain a target voltage set by a user. The wire feeder is designed to be operational on a CC power source yet automatically adjust the WFS at a rate of adjustment based on initial WFS so that a user-selected target voltage is maintained at the weld. A controller within the wire feeder is programmed to read an input from the user to the wire feeder identifying a target voltage, determine the rate of adjustment, and control the speed by which a drive assembly delivers metal filler to the weld based on the target voltage. By automatically adjusting the WFS, the user is not required to manually adjust the WFS to maintain the target voltage at the weld.